

Claims:

1. A cleaning implement comprising:

- (a) a handle; and
- (b) a removable cleaning pad comprising:
 - (i) at least one absorbent layer;
 - (ii) at least one additional element selected from the group consisting of:
 - (aa) optionally, a liquid pervious scrubbing layer;
 - (bb) optionally, an attachment layer;
 - (cc) optionally, multiple planar surfaces;
 - (dd) optionally, at least one functional cuff;
 - (ee) optionally, a density gradient throughout at least one absorbent layer;
 - (ff) optionally, at least one adhesive scrubbing strip removably attached to said cleaning pad; and
 - (gg) optionally, perfume carrier complex.

2. The cleaning implement of Claim 1 characterized in that the cleaning pad comprises a liquid pervious scrubbing layer comprising an apertured formed film.

3. The cleaning implement of Claim 1 characterized in that the cleaning pad comprises at least one functional cuff, preferably at least one looped functional cuff.

4. The cleaning implement of Claim 1 characterized in that the absorbent layer of the cleaning pad comprises a density gradient.

5. The cleaning implement of Claim 4 characterized in that the cleaning pad further comprises a first absorbent layer and a second absorbent layer, characterized in that the first absorbent layer has a density of from about 0.01 g/cm³ to about 0.15 g/cm³, preferably from about 0.03 g/cm³ to about 0.1 g/cm³, and the second absorbent layer has a density of from about 0.04 g/cm³ to about 0.2 g/cm³, preferably from about 0.1 g/cm³ to about 0.2 g/cm³; and further characterized in that the density of the first absorbent layer is at least about 0.04 g/cm³ less than, preferably at least about 0.07 g/cm³ less than, the density of the second absorbent layer.

6. The cleaning implement of Claim 1 characterized in that the cleaning pad comprises an adhesive scrubbing strip removably attached to the cleaning pad, and further characterized in that the adhesive scrubbing strip comprises material selected from the group consisting of nylon, polyester, polypropylene, abrasive material, and mixtures thereof.
7. The cleaning implement of Claim 6 characterized in that a ratio of an area of a surface of the cleaning pad to an area of a surface of the adhesive scrubbing strip is from about 840:1 to about 3:1, preferably from about 56:1 to about 18:1.
8. The cleaning implement of Claim 1 characterized in that the cleaning pad comprises a perfume carrier complex selected from the group consisting of cyclodextrin inclusion complex, matrix perfume microcapsules, and mixtures thereof.
9. The cleaning implement of Claim 8 characterized in that the perfume carrier complex is located in the absorbent layer of the cleaning pad.
10. The cleaning implement of Claim 1 characterized in that the cleaning pad comprises at least two layers selected from the group consisting of an absorbent layer, liquid pervious scrubbing layer, attachment layer, and combinations thereof; and further characterized in that the layers are bonded together by an adhesive capable of providing a bond with a bond retention of at least about 30%, preferably at least about 50%, more preferably at least about 70%, of a dry bond strength value between said layers following immersion in water at body temperature for one hour.
11. The cleaning implement of any one of Claims 1-10 characterized in that the cleaning pad either:
- (a) further comprises an attachment layer comprising a material selected from the group consisting of a translucent film, loop material, adhesive tape, and combinations thereof;
 - (b) further comprises at least two absorbent layers, preferably at least three absorbent layers, characterized in that the absorbent layers have multiple widths in the z-dimension;

- (c) comprises an absorbent layer comprising superabsorbent material selected from the group consisting of superabsorbent gelling polymers, hydrophilic polymeric absorbent foams, and mixtures thereof;
 - (d) has a resiliency of at least about 95%;
 - (e) has a squeeze-out value of not more than about 40%, preferably not more than about 25%, at 0.25 psi; or
 - (f) has a t_{1200} absorbent capacity of at least about 1 g of deionized water per g of the cleaning pad.
12. A method of cleaning a hard surface comprising wiping the surface with the cleaning implement of any one of Claims 1-11.
13. A hard surface cleaning composition comprising:
- (a) optionally, from about 0.001% to about 0.5% by weight of the composition of surfactant;
 - (b) optionally, hydrophilic polymer;
 - (c) optionally, organic solvent;
 - (d) optionally, from about 0.01% to about 1% by weight of the composition of mono- or polycarboxylic acid;
 - (e) optionally, from about 0.01% to about 1% by weight of the composition of odor control agent, preferably cyclodextrin;
 - (f) optionally, a source of peroxide;
 - (g) optionally, from about 0.001% to about 0.1% by weight of the composition of thickening polymer;
 - (h) aqueous solvent system;
 - (i) optionally, suds suppressor;
 - (j) optionally, from about 0.005% to about 0.2% by weight of the composition of a perfume comprising:
 - (i) optionally, from about 0.05% to about 90% by weight of the perfume of volatile, hydrophilic perfume material;
 - (ii) optionally, at least about 0.2% by weight of the perfume of volatile, hydrophobic perfume material;
 - (iii) optionally, less than about 10% by weight of the perfume of residual, hydrophilic perfume material; and

- (iv) less than about 10% by weight of the perfume of residual, hydrophobic perfume material; and
- (k) optionally, a detergent adjuvant.

14. The hard surface cleaning composition of Claim 13 characterized in that the composition comprises from about 0.005% to about 0.2% by weight of said composition of perfume, characterized in that the perfume comprises:

- (a) optionally, from about 0.05% to about 90% by weight of the perfume of volatile, hydrophilic perfume material;
- (b) optionally, at least about 0.2% by weight of the perfume of volatile, hydrophobic perfume material;
- (c) optionally, less than about 10% by weight of the perfume of residual, hydrophilic perfume material; and
- (d) less than about 10% by weight of the perfume of residual, hydrophobic perfume material.

15. The hard surface cleaning composition of Claim 14 characterized in that the composition further comprises from about 0.001% to about 0.5% by weight of the composition of surfactant; and further characterized in that a ratio of the surfactant to the perfume is from about 20:1 to about 1:50, preferably from about 1:1 to about 1:4.

16. The hard surface cleaning composition of Claim 13 characterized in that the composition comprises from about 0.25% to about 7% by weight of said composition of organic solvent, characterized in that the organic solvent has a boiling point of from about 120°C to about 180°C.

17. The hard surface cleaning composition of Claim 13 characterized in that the composition comprises no greater than about 0.5% of slowly volatile material having a boiling point of greater than about 160°C, preferably selected from the group consisting of non-volatile surfactant, amine buffer, organic solvent, and mixtures thereof.

18. A method of cleaning a hard surface comprising the steps of:

- (a) contacting the surface with a cleaning implement comprising a handle and a removable, dry, cleaning substrate to remove dust and fine particulate matter from the surface;

- (b) contacting the surface with a hard surface cleaning composition to wet the surface;
 - (c) contacting the wet surface with a cleaning implement comprising a handle and a removable cleaning pad to substantially remove the hard surface cleaning composition from the surface; and
 - (d) allowing the surface to dry without rinsing the surface with a separate rinse solution.
19. A method of cleaning hard surfaces comprising the steps of:
- (a) contacting the surface with a cleaning implement comprising a handle and a removable, dry, cleaning substrate to remove dust and fine particulate matter from the surface;
 - (b) contacting the surface with a cleaning implement comprising a handle and a removable, pre-moistened cleaning wipe to remove additional soil from the surface; and
 - (c) allowing the surface to dry without rinsing the surface with a separate rinse solution.
20. The method of Claims 18 or 19 characterized in that the removable, dry, cleaning substrate is a nonwoven hydroentangled cleaning sheet.
21. A cleaning implement comprising:
- (a) a handle;
 - (b) a support head pivotally attached to the handle;
 - (c) a cleaning substrate removably attached to the support head, characterized in that the cleaning substrate has an absorbent capacity of at least about 5 g/g; and
 - (d) a liquid delivery system for providing a cleaning liquid to a surface to be cleaned, wherein said liquid delivery system is configured to spray at least about 2 mils/sec of a cleaning liquid.
22. The cleaning implement of Claim 21 characterized in that the liquid delivery system is configured to either:
- (a) spray the cleaning liquid onto a surface with a spray efficiency of at least about 0.000006 mils/(sec x cm² x g/g), preferably at least about 0.0002 mils/(sec x cm²);
 - (b) spray the cleaning fluid onto a surface with a cleaning efficiency of at least about 0.0006 mils/(sec x cm² x unit Squeeze Out);
 - (c) provide a spray pattern having a spray depth of at least about 20 cm; or

(d) provide a spray pattern having a spray width of at least about 20 cm.

23. The cleaning implement of Claim 21 or 22 characterized in that the liquid delivery system comprises a spray nozzle, a pump in fluid communication with the spray nozzle, an electric motor driving the pump, a voltage source powering the motor, and a liquid filled canister in fluid communication with the pump.

24. The cleaning implement of Claim 23 characterized in that the spray nozzle is configured to either:

- (a) provide a spray angle of at least about 30 degrees;
- (b) provide an average particle size of at least about 100 μm ; or
- (c) provide an exit velocity of at least about 0.009 cm/sec.

25. The cleaning implement of Claim 23 characterized in that the voltage source is a plurality of batteries, characterized in that the batteries are configured to provide a voltage of at least about 1.5 volts for at least about 5 minutes of continuous pump operation.

26. The cleaning implement of Claim 21 characterized in that the handle has a Handle Deflection of less than about 15 mm.

27. A cleaning implement comprising:

- (a) a handle;
- (b) a support head pivotally attached to the handle;
- (c) a cleaning substrate removably attached to the support head; and
- (d) a hand-held liquid sprayer removably attached to the cleaning implement for dispensing a liquid onto a surface to be cleaned.

28. The cleaning implement of Claim 27 characterized in that the hand-held liquid sprayer either:

- (a) is stored within a cage attached to the handle; or
- (b) further comprises a cleaning liquid.

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